

### Features and Benefits

- Small size
- Surge Protection
- Over-current Protection
- Wave soldering or Reflow soldering available
- Withstand short time overload without broken

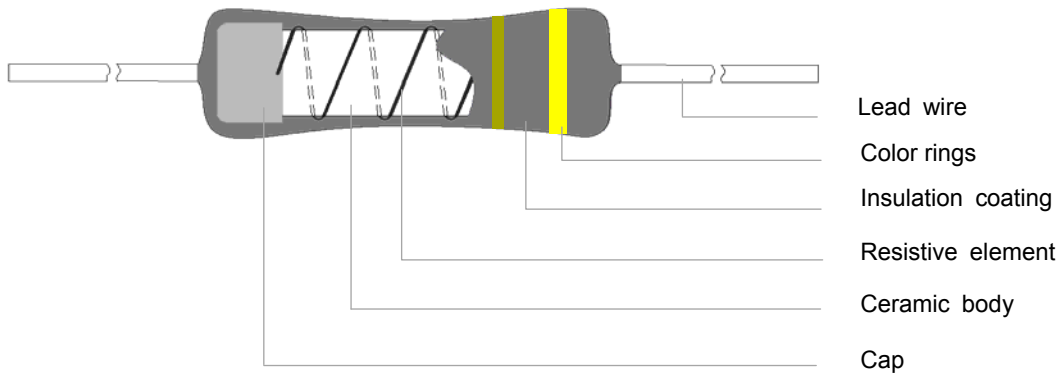


# Wirewound Fusing Resistor (RXF)

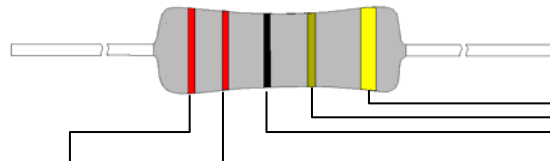
## Product Description

Wirewound fusing resistors (RXF) is a type of resistor, which is made by a resistive element wound on a ceramic body, then the body is wrapped by insulation coating. It works as a fixed resistor in normal operation, and designed to open under the over load condition, used as a protective component.

## Structure Diagrams



## Marking



Color		The first number	The second number	Multiple	Tolerance	Power
	Black	0	0	$10^0$	—	1/2W
	Brown	1	1	$10^1$	—	—
	Red	2	2	$10^2$	—	—
	Orange	3	3	$10^3$	—	—
	Yellow	4	4	$10^4$	—	2W
	Green	5	5	$10^5$	—	—
	Blue	6	6	$10^6$	—	—
	Purple	7	7	$10^7$	—	—
	Grey	8	8	$10^8$	—	—
	White	9	9	$10^9$	—	1W
	Gold	—	—	$10^{-1}$	±5%(J)	—
	Silver	—	—	$10^{-2}$	±10%(K)	—



# Wirewound Fusing Resistor (RXF)

## Glossary of Terms

### Wirewound Fusing Resistor

Wirewound fusing resistor are made by a winding metal wire around the insulation core, then wrapped by insulation material.

### Visible Damage

For the intended usage of the resistor, the visible damage is reduced.

### Rated Resistance

Determined by the design of resistor, usually marked on the resistor.

### Rated Dissipation

Testing conditions: Ambient temperature 70°C, continuous testing temperature ,and the change of resistance does not exceed the maximum allowable power dissipation of the test.

### Rated Voltage

DC or AC effective voltage that is calculated from the square root of nominal resistance and rated power multiplying.

### Temperature Coefficient

The resistance change between two given temperature divides the temperature difference.

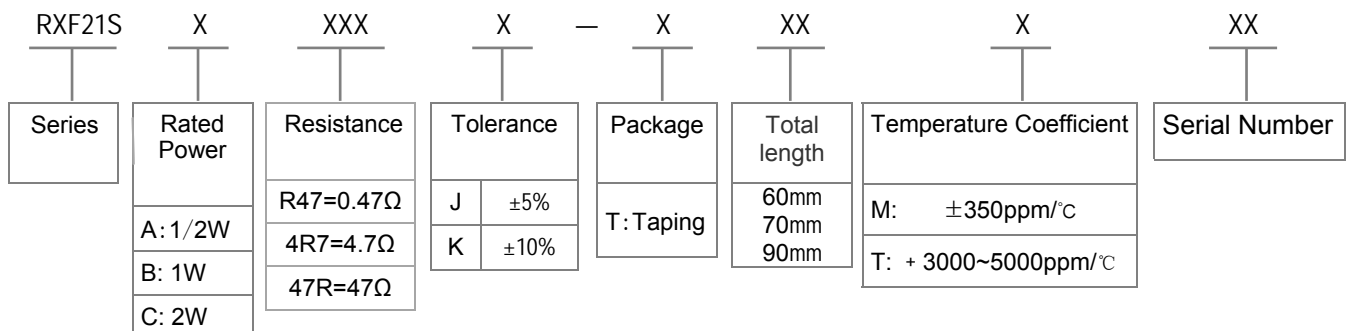
### Temperature Characteristic

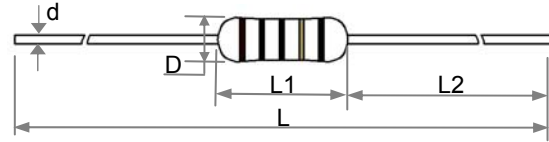
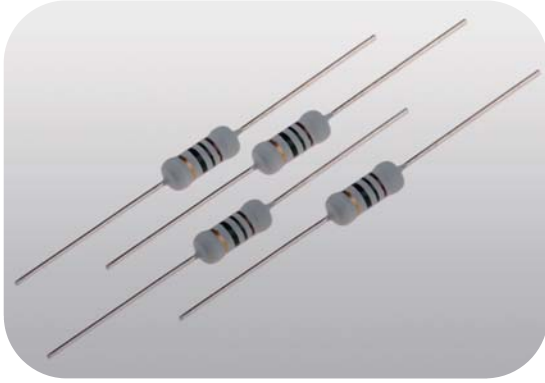
The maximum reversible change of resistance happens between the given temperatures, relative to the basic temperature 20°C.

### Fusing Characteristics

When applied overload , the resistor 's resistance is significantly increased, and the current through the resistor drops below 1/50 of the initial test current.The time from being applied overload to resistor fusing is fusing time, and this performance is called fusing characteristics.

## Part Number System





Dimensions (mm)

Series	Rated Power (W)	ΦD	Φd	*L	L1	L2
RXF21S	1/2	3.3±0.5	0.56±0.05	60±2	9±0.8	25±2
RXF21S	1	3.3±0.5	0.56±0.05	60±2	9±0.8	25±2
RXF21S	2	4.4±0.5	0.70±0.05	60±2	11±0.8	25±2

\*Note: "L" length can be customized as required.

### Key Features

- Temperature Coefficient (M:±350ppm/°C).
- Good heat durability, high load power.
- Incombustibility, light weight .
- Surge protection
- Suitable for Wave soldering and reflow soldering

### Applications

- Adapter
- Power supplies
- LED Lamps







### Agency Approvals

- CQC: CQC10001049758  
CQC10001049759  
CQC10001049760
- VDE: 40035527
- UL/cUL: E324712

### Designed to Standards

- UL 1412
- GB/T 5729
- GB/T 17626.5
- IEC 60115
- JIS C 5201
- SJ2865

### Specifications

Model	Rated Power (W)	Resistance Range (Ω)	Tolerances (%)	Operating Temperature Range (°C)	Agency Informations				Environmental status	
					 UL	 cUL	 CQC	 VDE	 RoHS	 REACH
RXF21SA xxxx-xxx <b>M</b>	1/2	0.27~30	± 5 ± 10	-55~+155	●	●	●	●	●	●
RXF21SB xxxx-xxx <b>M</b>	1	0.47~51	± 5 ± 10	-55~+155	●	●	●	●	●	●
RXF21SC xxxx-xxx <b>M</b>	2	3~68	± 5 ± 10	-55~+155	●	●	●	●	●	●

\*Note: Non-inductive resistor can be customized as required.

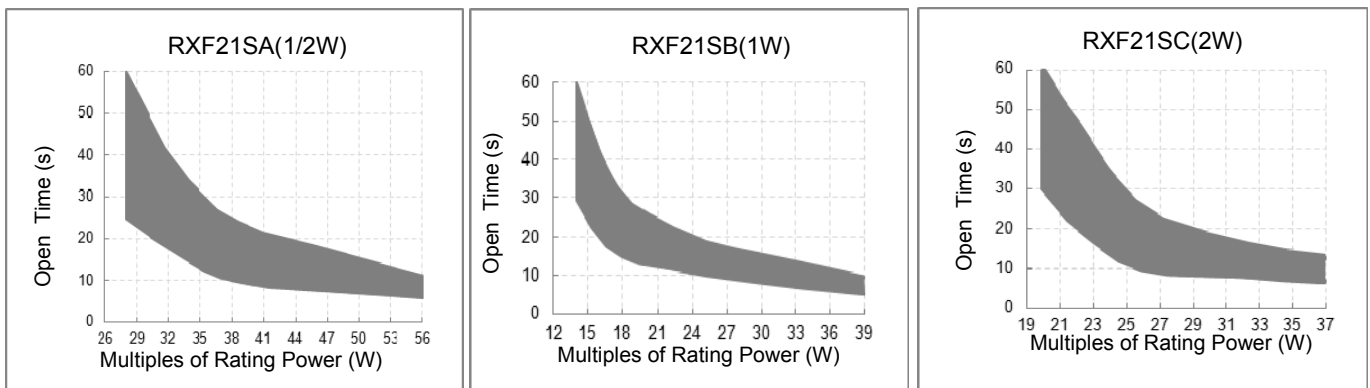


Special features

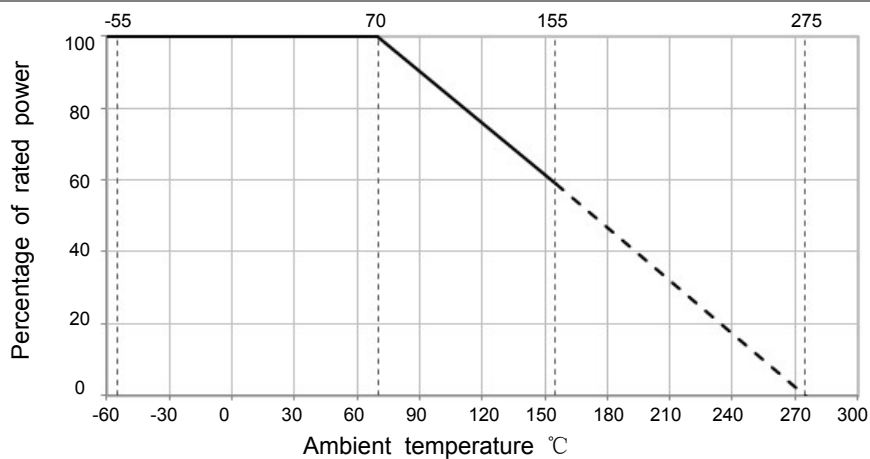
Model	Rated Power (W)	Surge Protection Max (KV)	UL	cUL	VDE	RoHS
RXF21SB-2R2JT60M	1	2.7	•	•	•	•
RXF21SB-4R7JT60M	1	2.5	•	•	•	•
RXF21SB-6R8JT60M	1	3.0	•	•	•	•
RXF21SB-10RJT60M	1	2.7	•	•	•	•
RXF21SB-12RJT60M	1	2.3	•	•	•	•
RXF21SB-20RJT60M	1	2.2	•	•	•	•
RXF21SC-2R2JT60M	2	3.5	•	•	•	•
RXF21SC-4R7JT60M	2	3.5	•	•	•	•
RXF21SC-6R8JT60M	2	3.8	•	•	•	•
RXF21SC-10RJT60M	2	3.7	•	•	•	•
RXF21SC-12RJT60M	2	3.5	•	•	•	•
RXF21SC-20RJT60M	2	3.7	•	•	•	•

Opening Time Curve

( Reference )



Rated Power Derating Curve

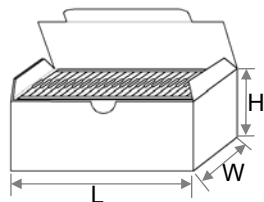




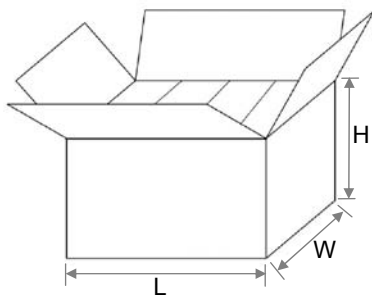
## Performances

Test Items	Test Conditions	Specifications	Standards	
Temperature coefficient of Resistance	$R_0$ : Resistance value at room temp. ( $T_0$ ). $R_1$ : Resistance value at room temp. plus 100°C ( $T_1$ ). Calculate resistance value change rate.	$\pm 350\text{PPM}/^\circ\text{C}$ 以内 Within $\pm 350\text{PPM}/^\circ\text{C}$	GB/T 5729 (4.8)	JIS C 5202 (5.2)
Short time overload	Rated voltage $\times 2.5$ times, 5 seconds	$\pm(1\%R+0.05\Omega)$	GB/T 5729 (4.13)	JIS C 5202 (5.5)
Temperature cycle	-55°C/30min, Room temp.:10 to 15min +85°C/30min, Room temp.:10 to 15min 5 cycles	$\pm(1\%R+0.05\Omega)$	GB/T 5729 (4.19)	JIS C 5202 (7.4)
Pulse overload	Rated voltage $\times 2.5$ times, 10000cycles. (1s ON, 25s OFF)	$\pm(2\%R+0.05\Omega)$	SJ2865 (1.8.2)	JIS C 5202 (5.8)
Endurance at room temp.	Rated voltage 1.5hr ON, 0.5hr OFF at room temp. for 1000hrs.	$\pm(5\%R+0.1\Omega)$	GB/T 5729 (4.25)	JIS C 5202 (7.10)
Resistance to soldering heat	Immerge into the 350°C $\pm 10^\circ\text{C}$ tin stove for 3.5 seconds.	$\pm(1\%R+0.05\Omega)$	GB/T 5729 (4.18)	JIS C 5201 (4.24)
Solderability	Immerge into the 260°C $\pm 10^\circ\text{C}$ tin stove for 10 seconds.	the soldering area is no less than 95%.	GB/T 5729 (4.17)	JIS C 5202 (6.4)
Overload Test	under overload of 16 times rated power for 5 minutes.	No evidence of fire	GB/T 5729 (4.26)	UL 1412 (15.0)

## Package Information



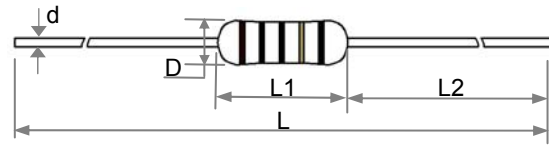
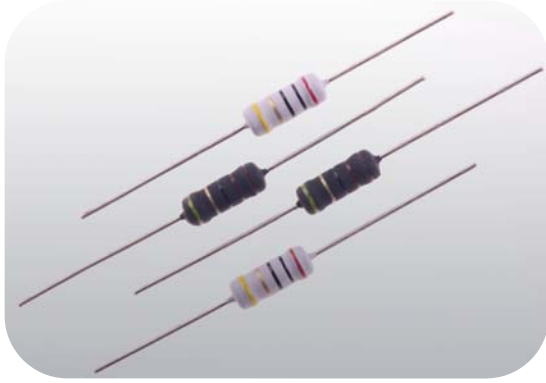
(Small package)



(Large package)

Series	Rated Power (W)	Dimensions (mm)			Quantity (Kpcs)
		L $\pm 5$	W $\pm 5$	H $\pm 5$	
RXF21S	1/2	255	76	98	2
RXF21S	1				2
RXF21S	2				1

Series	Rated Power (W)	Dimensions (mm)			Quantity (Kpcs)
		L $\pm 5$	W $\pm 5$	H $\pm 5$	
RXF21S	1/2	400	275	220	20
RXF21S	1				20
RXF21S	2				10



Dimensions (mm)

Series	Rated Power (W)	ΦD	Φd	*L	L1	L2
RXF21S	1/2	3.3±0.5	0.56±0.05	60±2	9±0.8	25±2
RXF21S	1	3.3±0.5	0.56±0.05	60±2	9±0.8	25±2
RXF21S	2	4.4±0.5	0.70±0.05	60±2	11±0.8	25±2

\*Note: "L" length can be customized as required.

### Key Features

- Positive temperature coefficient of resistance (T:+3000℃~+5000ppm/℃)
- Safety broken under limited short circuit test
- Shock durability
- Suitable for Wave soldering or reflow soldering available

### Applications

- Adapter
- Power supplier
- LED Lamps

### Agency Approvals

- CQC: CQC10001049758  
CQC10001049759  
CQC10001049760
- VDE: 40035527
- UL/cUL: E324712

### Designed to Standards





- UL 1412
- GB/T 5729
- GB/T 17626.5
- IEC 60115
- JIS C 5201
- SJ2865

### Specifications

Model	Rated Power (W)	Resistance Range (Ω)	Tolerances (%)	Operating Temperature Range (°C)	Agency Informations				Environmental status	
					UL	cUL	CQC	VDE	RoHS	REACH
RXF21SA xxxx-xxx T	1/2	0.27~30	± 5 ± 10	-55~+155	●	●	●	●	●	●
RXF21SB xxxx-xxx T	1	0.47~51	± 5 ± 10	-55~+155	●	●	●	●	●	●
RXF21SC xxxx-xxx T	2	3~68	± 5 ± 10	-55~+155	●	●	●	●	●	●

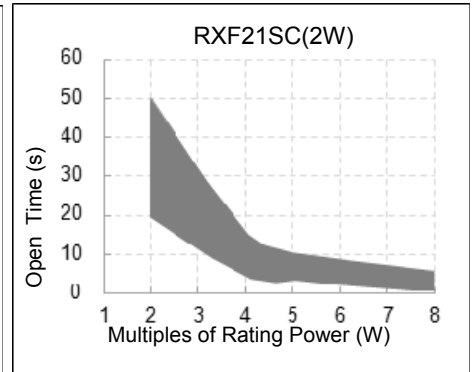
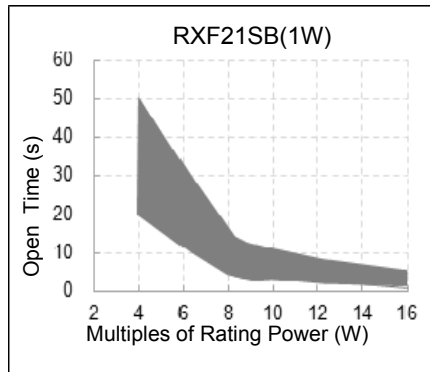
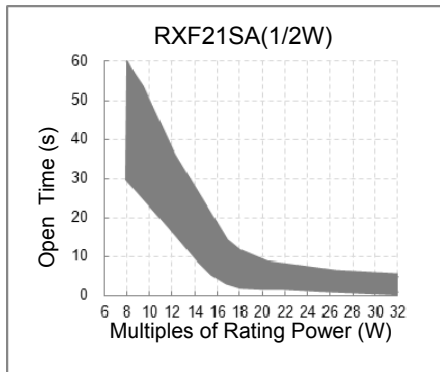


## Special features

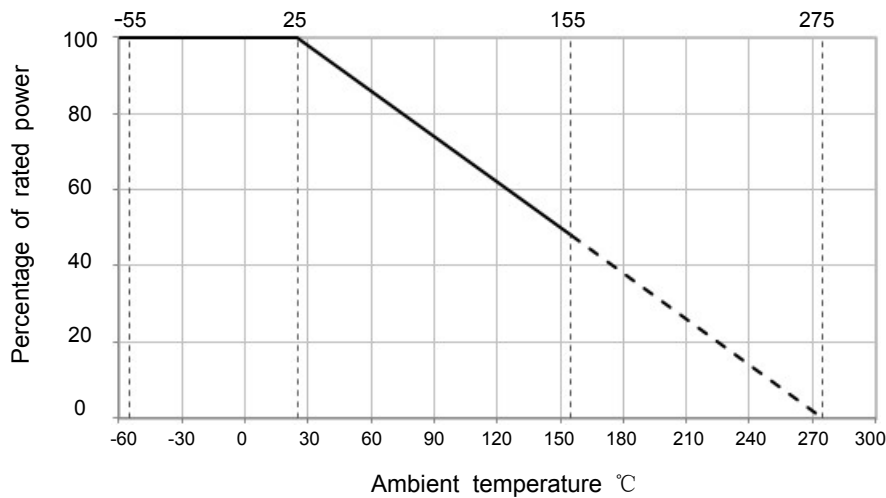
Model	Rated Power (W)	Surge protection Max (KV)	Short-circuit test voltage Max (Vac)	 UL	 cUL	 VDE	 RoHS
RXF21SB-4R7K-T	1	1.3	264	•	•	•	•
RXF21SB-5R1K-T	1	1.6	264	•	•	•	•
RXF21SB-6R8K-T	1	1.6	264	•	•	•	•
RXF21SB-10RK-T	1	1.8	264	•	•	•	•
RXF21SB-12RK-T	1	2.0	264	•	•	•	•

## Opening Time Curve

( Reference )



## Rated Power Derating Curve



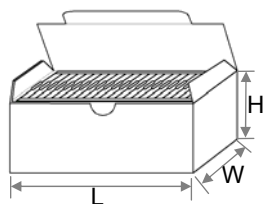




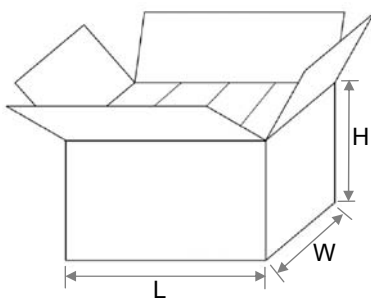
## Performances

Test Items	Test Conditions	Specifications	Standards	
Temperature coefficient of Resistance	R <sub>0</sub> : Resistance value at room temp. (T <sub>0</sub> ). R <sub>1</sub> : Resistance value at room temp. plus 100°C (T <sub>1</sub> ). Calculate resistance value change rate.	With-in+3000~+5000ppm/°C	GB/T 5729 (4.8)	JIS C 5202 (5.2)
Short time overload	Rated voltage×2.5 times, 5 seconds	±(10%R+0.05Ω)	GB/T 5729 (4.13)	JIS C 5202 (5.5)
Temperature cycle	-55°C/30min,+85°C/30min, Room temp. :10 to 15min,5 cycles	±(10%R+0.05Ω)	GB/T 5729 (4.19)	JIS C 5202 (7.4)
Pulse overload	Rated voltage×2.5 times,10000cycles. (1s ON, 25s OFF)	±(10%R+0.05Ω)	SJ2865 (1.8.2)	JIS C 5202 (5.8)
Endurance at room temp.	Rated voltage 1.5hr ON, 0.5hr OFF at room temp. for 1000hrs.	±(10%R+0.1Ω)	GB/T 5729 (4.25)	JIS C 5202 (7.10)
Resistance to soldering heat	Immerge into the 350°C ±10°C tin stove for 3.5 seconds.	±(10%R+0.05Ω)	GB/T 5729 (4.18)	JIS C 5201 (4.24)
Solderability	Immerge into the 260°C ±10°C tin stove for 10 seconds.	The soldering area is no less than 95%.	GB/T 5729 (4.17)	JIS C 5202 (6.4)
Overload Test	under overload of 16 times rated power for 5 minutes.	No evidence of fire	GB/T 5729 (4.26)	UL 1412 (15.0)
Surge test	10 pulses test at 1 min	Interval without broken	GB/T 17626.5	IEC61000-4-5
Limited Short Circuit Test	Fusing resistor test shall be during or after the test	No evidence of risk of fire or electric shock		UL 1412 (18.2)

## Package Information



(Small package)



(Large package)

Series	Rated Power (W)	Dimensions (mm)			Quantity (Kpcs)
		L±5	W ±5	H±5	
RXF21S	1/2	255	76	98	2
RXF21S	1				2
RXF21S	2				1

Series	Rated Power (W)	Dimensions (mm)			Quantity (Kpcs)
		L±5	W ±5	H±5	
RXF21S	1/2	400	275	220	20
RXF21S	1				20
RXF21S	2				10